

**Notice of Allowability**

Application No.

10/003,340

Examiner

Lawrence B. Williams

Applicant(s)

LITTLE, JAMES M.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 14 November 2005.
2. ☒ The allowed claim(s) is/are 4, 8-9, 13, 17-18, and 20-30, renumbered as 1-17, respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                       |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____.  |

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Roger R. Wise on 30 January 2006.

The application has been amended as follows:

a.) Cancel claims 5-6 and 14-15.

### **REASONS FOR ALLOWANCE**

1. The following is an examiner's statement of reasons for allowance: the instant application discloses an adaptive slicer threshold generation system. A search of prior art records has failed to disclose an adaptive slicer threshold generation system, comprising;

“a first combiner to combine the received binary signal, a delayed binary signal from the first delay element, and a delayed output signal from a second delay element; and a gain element to manipulate an output signal from the first combiner, wherein the second delay element delays the output signal that is combined by the first combiner with the received binary signal and the delayed binary signal, and a second combiner to combine the first average value of the first binary signal and the second average value of the second binary signal to generate a combined output” as disclosed in claim 4.

“a delay element to delay an output signal from the first combiner that is compared with the received binary signal by the minimum comparator, wherein the first combiner combines the output signal from the minimum comparator with a leakage signal from a gain element, and the gain element manipulates the output signal from the first combiner; a peak detector to determine a maximum value of a binary zero; and a second combiner to combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output” as disclosed in claims 8 and 17.

“a peak detector to determine a maximum value of a binary zero, wherein the

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peak detector includes a peak comparator to compare a received binary signal with a delayed output signal from a first combiner, and a delay element to delay an output signal from the first combiner that is compared with the received binary signal by the minimum comparator, the first combiner combining an output signal from the peak comparator with a leakage signal from a gain element, and the gain element manipulating the output signal from the first combiner; and a second combiner to combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output” as disclosed in claims 9 and 18.

“a second moving average filter to determine a second average value of a second binary signal, wherein at least one of the first moving average filter and the second moving average filter includes a first delay element to delay a received binary signal, a first combiner to combine the received binary signal, a delayed binary signal from the first delay element, and a delayed output signal from a second delay element, and a gain element to manipulate an output signal from the first combiner, the second delay element delaying the output signal that is combined by the first combiner with the received binary signal and the delayed binary signal, and a second combiner to combine the first average value of the first binary signal and the second average value of the second binary signal to generate a combined output” as disclosed in claim 13.

The prior art also fails to disclose a method of generating an adaptive slicer threshold, comprising;

“determining a first average value by combining a first received binary signal and a first delayed binary signal, wherein the first average value is further determined by

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combining a first leakage signal with the first received binary signal and the first delayed binary signal, determining a second average value by combining a second received binary signal and a second delayed binary signal; combining the first average value and the second average value to generate a combined output, and setting a value of a slicer threshold within a data eye” as disclosed in claim 20.

“determining a first average value by combining a first received binary signal and a first delayed binary signal, determining a second average value by combining a second received binary signal and a second delayed binary signal, wherein the second average value is further determined by combining a second leakage signal with the second received binary signal and the second delayed binary signal, combining the first average value and the second average value to generate a combined output, and setting a value of a slicer threshold within a data eye” as disclosed in claim 21.

“determining a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal, determining a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal, wherein the second received binary signal comprises only binary values of zero and includes both positive and negative values, combining the minimum value of the binary one and the maximum value of the binary zero to generate a combined output; and setting a value of a slicer threshold within a data eye” as disclosed in claim 22.

“determining a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal, wherein the minimum value of the binary one is further determined by combining a first leakage signal with a first output signal', determining a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal; combining the minimum value of the binary one and the maximum value of the binary zero to generate a combined output; and setting a value of a slicer threshold within a data eye” as disclosed in claim 23.

“determining a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal, determining a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal, wherein the maximum value of the binary zero is further determined by combining a second leakage signal with a second output signal, combining the minimum value of the binary one and the maximum value of the binary zero to generate a combined output; and setting a value of a slicer threshold within a data eye” as disclosed in claim 24.

The prior art also fails to teach an adaptive slicer generation system, comprising; a machine-readable storage medium; and machine-readable program code, stored on the machine-readable storage medium, the machine-readable program code having instructions to”

“determine a first average value by combining a first received binary signal and a first delayed binary signal, determine a second average value by combining a second received binary

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signal and a second delayed binary signal, wherein the second received binary signal comprises only binary values of zero and includes both positive and negative values, combine the first average value and the second average value to generate a combined output, and set a value of a slicer threshold within a data eye” as disclosed in claim 25.

“determine a first average value by combining a first received binary signal and a first delayed binary signal, wherein the machine-readable program code further includes instructions to combine a first leakage signal with the first received binary signal and the first delayed binary signal to determine the first average value, determine a second average value by combining a second received binary signal and a second delayed binary signal, combine the first average value and the second average value to generate a combined output, and set a value of a slicer threshold within a data eye” as disclosed in claim 26.

“determine a first average value by combining a first received binary signal and a first delayed binary signal, wherein the machine-readable program code further includes instructions to combine a first leakage signal with the first received binary signal and the first delayed binary signal to determine the first average value, determine a second average value by combining a second received binary signal and a second delayed binary signal, combine the first average value and the second average value to generate a combined output, and set a value of a slicer threshold within a data eye” as a disclosed in claim 27.

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“determine a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal, determine a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal, wherein the second received binary signal comprises only binary values of zero and includes both positive and negative values, combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output, and set a value of a slicer threshold within a data eye” as disclosed in claim 28.

“determine a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal, wherein the machine-readable program code further includes instructions to combine a first leakage signal with a first output signal to determine the minimum value of the binary one, determine a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal, combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output, and set a value of a slicer threshold within a data eye” as disclosed in claim 29.

“determine a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal, determine a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal, wherein the machine-readable program code further includes instructions to combine a second leakage signal with a



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second output signal to determine the maximum value of the binary zero, combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output, and set a value of a slicer threshold within a data eye” as disclosed in claim 30.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

## CONCLUSION

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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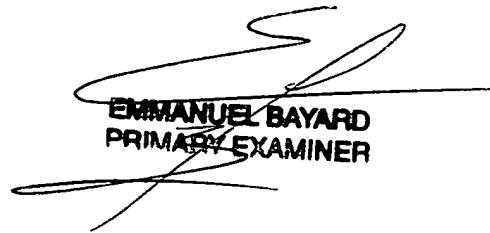
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Lawrence B. Williams

lbw

January 30, 2006



**EMMANUEL BAYARD**  
**PRIMARY EXAMINER**